

Amendments to the Claims:

The following represents a complete listing of the claims in this application including all amendments submitted in this paper. Any claims canceled or withdrawn are canceled or withdrawn without prejudice, the applicants specifically reserving the right to pursue such claims in continuing or divisional applications. By this paper, claims 48 and 61 have been amended and claims 58-59 and 72-76 have been withdrawn.

Listing of Claims

1-47(canceled).

48(currently amended). A method for promoting apoptosis in a cell, the method comprising the step of: introducing into the cell a molecule comprising (1) a nucleic acid binding portion which binds to a site at or associated with a selected apoptosis-related gene which site is present in a genome and ~~(2) a modifying portion~~, wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analog, and (2) a repressor or modifying portion wherein the repressor or modifying portion comprises a polypeptide or Peptidomimetic.

49(previously presented). A method as in claim 48 wherein the modifying portion selected from the group consisting of expression repressor portions and portions that are capable of modulating covalent modification of nucleic acid or chromatin.

50 (previously presented). A method as in claim 48 wherein the repressor or modifying portion is selected from the group consisting of chromatin inactivation portions, all or a portion of a component of a DNA methylase complex, all or a portion of a polypeptide which binds to or facilitates the recruitment of a DNA methylase complex, all or a portion of a component of a histone acetyltransferase and all or a portion of a polypeptide which binds to or facilitates the recruitment of a histone acetyltransferase complex.

51 (previously presented). The method as in claim 48 wherein the polypeptide or peptidomimetic part of the molecule has a molecular mass of less than 11 kDa.

52 (previously presented). A method as in claim 48 wherein the nucleic acid binding portion is a DNA binding portion.

53 (previously presented). A method as in claim 48 wherein the nucleic acid binding portion is an RNA binding portion and the site present in a genome is a nascent RNA being transcribed from DNA.

54 (previously presented). A method as in claim 48 wherein the oligonucleotide or oligonucleotide analog or mimetic is selected from the group consisting of a triplex forming oligonucleotide (TFO) and a peptide nucleic acid (PNA).

55 (previously presented). A method as in claim 50

wherein the chromatin inactivation portion facilitates histone deacetylation.

56(previously presented). A method as in claim 50 wherein the chromatin inactivation portion is selected from the group consisting of all or a portion of a component of a histone deacetylation (HDAC) complex and all or a portion of a polypeptide which binds to or facilitates the recruitment of a HDAC complex.

57(previously presented). A method as in claim 56 wherein the component of the HDAC complex or the polypeptide which binds to or facilitates the recruitment of a HDAC complex is any one of the group consisting of PLZF, N-CoR, SMRT, Sin3, SAP18, SAP30, HDAC, NuRD, MAD1, MAD2, MAD3, MAD4, Rb or E7.

58(withdrawn). A method as in claim 57 wherein the chromatin inactivation portion is all or a N-CoR- or SMRT-binding part of PLZF.

59(withdrawn). A method as in claim 57 wherein the chromatin inactivation portion is all or an enzymatically active part of a HDAC.

60(previously presented). A method as in claim 57 wherein the chromatin inactivation portion is all or a histone deacetylase complex-binding part of one selected from the group consisting of SAP18, E7 and MAD1.

61(currently amended). A method as in claim 48 wherein

the molecule further comprises a portion which facilitates cellular entry and/or nuclear localization wherein the portion which facilitates cellular entry and/or nuclear localization is a small peptide of 7-16 amino acids selected from the group consisting of Modified Antennapedia homeodomain (RQIKIWFQNRRMKWKK) SEQ. ID NO:4 and basic HIV TAT internatalisation peptide (C(Acm)GRKKRRQRRRPQC) SEQ. ID NO:5, where C(Acm) is a Cys-acetamidomethyl or ~~SV40~~ SV40 nuclear localization signal (PKKKRKV-NH₂) SEQ. ID NO:19.

62(previously presented). A method as in claim 48 wherein the nucleic acid binding portion and the repressor or modifying portion are fused.

63(previously presented). A method as in claim 48 wherein the cell is an eukaryotic cell.

64(previously presented). A method as in claim 48 wherein the apoptosis-related gene is Bcl-2, Bcl-XI or Akt.

65(previously presented). A method as in claim 48 wherein the cell is selected from the group consisting of an animal cell contained within an animal and a plant cell contained within a plant.

66(previously presented). A method as in claim 48 wherein the expression of one or more selected genes in a human is suppressed.

67(previously presented). A method as in claim 48

including the step of using a molecule as defined in claim 48 in the manufacture of an agent for modulating the expression of the selected apoptosis-related gene in a cell.

68(previously presented). A method as in claim 67 wherein the agent is for suppressing the expression of the selected gene.

69(previously presented). A method of treating a patient in need of suppression, modulation or promotion of apoptosis of the expression of a selected apoptosis-related gene by administering to the patient an effective amount of a molecule as defined in claim 48.

70(previously presented). A method as in claim 48 comprising the step of using a molecule as defined in claim 48 in the manufacture of a medicament for suppressing the expression of a selected apoptosis-related gene in a patient.

71(previously presented). A pharmaceutical composition comprising a molecule as in claim 48 wherein the molecule is combined with a pharmaceutically acceptable carrier.

72(withdrawn). A pharmaceutical composition as in claim 71 comprising an element for promoting cellular uptake of the molecule.

73(withdrawn). A host cell comprising a molecule as defined in claim 48.

74(withdrawn). A host cell as in claim 73 wherein the host

cell is selected from the group consisting of a bacterial cell, an animal cell, and a plant cell.

75(withdrawn). A method for designing a molecule for modulating or suppressing, expression of a selected apoptosis-related gene in a cell, the method comprising steps of:

- (1) identifying a site at or associated with the selected gene;
- (2) identifying or designing a nucleic acid binding portion which bind to, or is predicted to bind to, the site (or a polynucleotide having or comprising the nucleotide sequence of the site);
- (3) preparing a molecule comprising the nucleic acid binding portion and a modifying portion;

wherein the nucleic acid binding portion comprises an oligonucleotide or oligonucleotide mimic or analog, and wherein the modifying portion comprises a polypeptide or peptidomimetic which is capable of modulating or repressing, covalent modification of nucleic acid or chromatin.

76(withdrawn). A method as in claim 75 selectively further comprising steps of:

- (4) performing a quality control assessment on the molecule preparation in order to determine that the nucleic acid binding portion and repressor or other modifying portion are attached to each other; and/or

- (5) testing the affinity and/or specificity of binding of the nucleic acid binding portion to the site and/or a polynucleotide having or comprising the nucleotide sequence of the site; and/or
- (6) testing the affinity and/or specificity of binding of the molecule to the site and/or a polynucleotide having or comprising the nucleotide sequence of the site; and/or
- (7) testing the efficacy of the molecule or polynucleotide in modulating or suppressing the expression of the gene and/or of a reporter gene comprising the nucleotide sequence of the site.

77(previously presented). A method of treating a patient in need of promotion of apoptosis as in claim 69 including the step of administering to the patient an effective amount of a cell death inducer together with a molecule as defined in claim 48.

78(previously presented). A method as in claim 77 wherein the cell death inducer is selected from the group consisting of a chemotherapeutic agent and radiation treatment or a combination thereof.